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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,239	05/07/2001	Ruby B. Lee	4759-104 US	2238
7590 12/20/2004 Mathews, Collins, Shepherd & Gould, P.A. 100 Thanet Circle, Suite 306 Princeton, NJ 08540			EXAMINER CALLAHAN, PAUL E	
			ART UNIT	PAPER NUMBER
			2137	
DATE MAILED: 12/20/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/850,239	Applicant(s) LEE ET AL.	
	Examiner Paul Callahan	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

1 (one)

(AC)

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ~~X~~ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-77 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-57 and 66-77, drawn to a method of performing an arbitrary permutation in a programmable processor via defining bit positions in a sequence of bits in a source register, to be permuted via a permutation instruction, and via assembly of the bits into a destination register, and repetition of the permutation operation on the bits assembled into the destination register, classified in class 380, subclass 265.

II. Claims 58-61, drawn to, a computer system for performing an arbitrary permutation comprising; a source register, a configuration register, a destination register, and by use of a GRP, classified in class 712, subclass 8.

III. Claims 64 and 65, drawn to a circuit implementing a permutation instruction comprising a first matrix of a plurality of operation units each of which comprise a first input coupled to a first and a second input, and a control input where the control input controls the connection between the first and second inputs, a second matrix that is an inversion of the first, with the first matrix being selectively coupled to the second, classified in class 708, subclass 514.

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2. The inventions are distinct, each from the other because:

Inventions I, II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions because; invention II discloses the use of a configuration circuit not found as a limitation in inventions I and III and thus constitutes a different mode of operation and lack of a disclosure of being usable in inventions I and III; and because invention III teaches the use of matrices as the bit storage and destination locales and the operative configuration of the matrices teaches a different mode of operation from inventions I and II and lack of a disclosure of being usable together with inventions I and II.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required; for Group III, i.e., classes/subclasses 708/514 and 712/10 is not required for Groups I and II; for Group II, i.e. classes/subclasses 712/4, 7, 8 is not required for Groups I and III, restriction for examination purposes as indicated is proper.

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5. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application:

Information used in the writing of the specification that relates to the programmable processor used in permutation operations, any information relating to the arrangement of circuit elements contemplated by the applicant for use in permutation operations and used in preparation of the specification, and any additional published technical or research papers used in the preparation of the specification.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Caldwell, can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is: (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

12/01/04

Paul Callahan

Andrew Caldwell
Andrew Caldwell